Communication Technology: The New Mercenary

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The Marine Corps no longer fights conventional battles. Today's enemies are not necessarily gun-toting combatants; they can be abstracts like hunger, poverty, and a lack of reliable information. When fighting both conventional and unconventional enemies at the same time, the challenge to stay informed with up-to-date intelligence at the lowest echelons of decentralized command can pose as big a problem as the insurgency itself. Fortunately, commercial technology is advancing at unprecedented rates, providing an ever-widening array of communication tools to keep the operational forced informed up and down the chain of command.

Unfortunately, this commercial equipment comes at a cost: complex maintenance requirements or lack of experienced operators will mitigate the equipment's usefulness. In the end, the Marine Corps' overdependence on commercial, off-the-shelf (COTS) communication equipment is weakening the Corps' ability to self-sustain by creating a reliance on warrantees and distant repair centers for maintenance and replacement, civilian contractors for technical support, and on-the-job training as the sole source of operator instruction.

Warrantees

As with most commercially procured items from toaster ovens bought at the local electronic stores to a new car, COTS communication equipment generally comes with some form of manufacturer warrantee for parts, labor, or both. While it may be argued that these warrantees save the Marine Corps money, one must consider a number of restrictions associated with warrantees that diminish the Marine Corps' ability to self-sustain.

The Marine Corps has military occupational specialties (MOSs) specifically for the maintenance of Marine Corps communication and electronics equipment. The Marines in these MOS have been trained to provide several levels of maintenance and repair to the communication equipment that supplies reliable command and control capabilities to the operating forces. As with most warrantees, anyone not specifically authorized by the manufacturer who attempts to fix an item in need of repair effectively voids the warrantee. Therefore, Marines at Marine Corps-specific maintenance units and organizations are unable to repair COTS equipment organic and essential to the deploying forces, regardless of technical capability. Should a Marine attempt a repair but actually make the problem worse, the using

unit has no further recourse for repair as the warrantee has been voided but the equipment remains inoperable.

If a unit decides to use the manufacturer's warrantee, it may be required to ship the piece of equipment long distances using commercial means. If the defective equipment is being used in support of Operation Enduring Freedom (OEF) or Operation Iraqi Freedom (OIF) in-theater, the use of commercial shipping can be both costly and time-consuming as transit times and distances to and from Afghanistan and Iraq are long. If a unit has no redundancy for this particular piece of COTS equipment, then it may be without a critical command and control node for several days or weeks. Finally, should the equipment be sent to the manufacturer for repair but returned still inoperable, or should it be damaged during shipment, the entire process must be repeated.

Conversely, if a piece of COTS equipment is past its warrantee or never had one, Marines in a maintenance MOS may not be able to repair it should it become damaged. For example, COTS gear purchased through the Urgent Universal Needs Statement (Urgent-UNS), whereby commanders may procure COTS equipment outside the normal bidding-and-fielding system established to provide the Marine Corps with properly-funded and fielded equipment. Any gear that has not gone through the normal Marine Corps procurement process is unlikely to be adequately presented

or taught in the Marine Corps Communication-Electronics School (MCCES) curriculum for maintainers producing maintenance Marines who are underprepared for the challenges awaiting them in the operating forces.[1]

Warrantees may help the Marine Corps, though. At larger forward operating bases (FOBs) in Afghanistan and Iraq, several government contractors, including Harris Corporation and DataPath – manufacturers of commercial satellite systems - have established company repair centers to provide quick and efficient repair capabilities to damaged or defective equipment.[2] Such accessibility to the manufacturers has proven to be quite effective. However, government contractors only operate out of FOBs where an established presence has been operating for an extended period of time.[3] The Marine Corps is not structured, manned, or doctrinally trained to be an occupation force, though; therefore, an extended Marine presence at well-established FOBs is rare. Additionally, because the Marine Corps is expeditionary in nature, Marine units would not be able to avail themselves of the repair centers while engaging in

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[1] Marine Corps Communication-Electronics School, *Alpha Company Class Information*, Date unknown, https://www.29palms.usmc.mil/tenants/mcces/aco/acoschedesc.asp (13 February 2009).
[2] Capt Pepin, Joni, USMC, Personal interview (12 October 2008).
[3] The author spent six months serving with a communication battalion on Camp Fallujah, Iraq, during which time he interacted with manufacturer representatives on a near-daily basis.

maneuver warfare as this type of warfare requires units to be on the front lines of battle where no government contractor is allowed.

Whether or not commercial repair is locally available, a heavy reliance on COTS communication equipment and its manufacturer will leave units suffering from a lack of command and control and information dissemination means. Such a shortage could be disastrous for units engaged in an information-intensive war.

Civilian Contractors

Sometimes COTS communication equipment is operated or maintained by a civilian representative of the manufacturer. An operator/maintainer situation as this would seem to solve the warrantee and maintenance problems. However, utilizing civilian contractors, especially in combat zones, poses a new set of difficulties for operational units.

As different as individual pieces of equipment are, so too are the contracts under which civilians provide communication operation and/or maintenance services to a deployed unit. No Marine Corps-wide standard exists delineating guidelines for contracts held by civilian companies providing services as they relate to that company’s equipment. Often, the specifics of the

contracts are left to the using unit and submitted to the appropriate comptroller's office for approval and payment.[4] Some contracts set limits on the number of hours per day, and days per week a contractor may be available. In-theater, Marine Corps operations continue 24 hours and equipment may fail at any time – not just during a contractor's specified shift. If a contract does not allow for unplanned overtime or an on-call relationship, the Marine Corps ends up paying more to a company than the current stipulations of the contract. Consequently, units are being required to wait until a contractor is available to receive the attention they require. Neither situation is beneficial to the unit depending on the proper operation and function of their equipment.

In addition to potentially demanding contracts, civilians who are not specifically trained to operate in the austere conditions like those in Afghanistan or Iraq, will find deployments exceptionally harsh in the tolls they levy against family time and other personal intangibles. Despite the monetary benefits afforded to the many civilians working alongside Marines in combat zones, the turnover rate can be high as contractors eventually realize the intangible toll deployments

[4] During the author's deployment to Iraq, he reviewed and submitted for renewal two separate contracts based solely on the specifics needed by his unit at that time. Both contracts were renewed with no input from higher commands.

can have. Just as the cohesion of Marine Corps units is important, so are the working relationships developed between communication Marines and the contractors providing support. This relationship suffers any time contracted staff turnover occurs, whether due to contract renewal or due to deployment stresses for which civilians are untrained and sometimes unprepared. The diminished cohesion can have a noticeable effect on the quality of communication services provided to a unit. [5]

As a specific piece of COTS equipment, especially Very Small Aperture Terminal (VSATs) satellite communication systems, become more commonplace on the battlefield, the manufacturer providing support may be stretched thin in an effort to cover an entire battlespace. Sometimes a manufacturer must rush to provide contractors without providing them with adequate training. Consequently, units may find they are paired with a contractor who is just as unfamiliar with the equipment he or she is meant to support as are the Marines operating it. This provides little assistance to the using unit, but still requires the unit to provide housing, messing, and protection or security for the civilian contractor. Such an “addition” to a unit can act as a de facto deduction from a unit’s personnel end-

[5] U.S. Government Accountability Office, *Rebuilding Iraq: Actions Needed to Improve Use of Private Security Providers*, 28 July 2005, http://www.gao.gov/products/GAO-05-737 (13 February 2009).

strength, opposite the intended effect of contracted support: freeing a Marine to perform other duties.

During a time when the Marine Corps is fighting to increase its overall numbers to 202,000 Marine, the concept of “every Marine a rifleman” becomes especially important. This ethos, however, does not extend to civilian contractors. In combat, all Marines will or may have to stand watches, go on patrols, and carry weapons with the intent of firing if necessary. Every Marine contributes to the safety and success of the unit. Contractors cannot perform the same patrolling and security functions. As a consequence of their civilian status, contractors require a form of babysitting which can ultimately lessen a unit’s effectiveness.

On-the-Job Training

The ability to furnish units with state-of-the-art technologies to fight a technologically proficient enemy is certainly of great benefit. However, simply providing emerging technologies to operating forces does not win today’s asymmetric battles. Emerging technologies often incorporate many new functions simultaneously or complete old tasks in a new way. Regardless, new gadgets and gizmos are worthless if Marines who

need them are not able to operate them or benefit from the advancements.

The MCCES curriculum trains Marines to operate and/or maintain a variety of tactical and COTS equipment. However, emerging technologies that may be of use on the battlefield do not necessarily make it into the MCCES curriculum before being pushed to the operating forces, if at all. A primary culprit of this deficiency is the rapid procurement of equipment through the Urgent-UNS process. Often, the need for these new technologies present themselves more quickly than the training may become available. Consequently, COTS purchases impose an impossibly steep learning curve on units receiving the equipment as the equipment is largely unknown to the unit prior to its arrival at the unit’s location. Operational forces are often required to contact manufacturers directly to receive training on equipment prior to deployment, adding to an ever-increasing list of pre-deployment training requirements mandated by the Marine Corps.

Units that aren’t fortunate enough to receive training prior to deployment have to learn the intricacies of their new equipment once in-theater; posing two problems. The first is the potential lack of trained operators or maintenance personnel in-theater to provide a train-the-trainer schoolhouse environment. Such a circumstance leaves a unit relying strictly on any

manufacturer-provide operator, instruction manuals, or whatever word-of-mouth advice may be gleaned from other units in the same predicament. Secondly, Marine units may have an immediate need for specialized COTS communication equipment but will be lacking the knowledge to operate it making the equipment worthless to the unit in need until training can be arranged. A piece of equipment is only as functional as the operator who can use it properly. Without the requisite training, Marines have additional equipment for which they are accountable but ultimately serves no useful purpose. Ultimately, a Marine Corps unit faced with this predicament is not as mission capable as it could be.

Conclusion

Self-reliance allows the Marine air-ground task force to operate independently throughout the world and quickly respond to threats, natural or man-made, as they arise. As emerging communication technologies and COTS equipment become readily available and offer the Marine Corps the benefit of doing more with less for longer periods of time, it seems foolish not to purchase and develop the technologies to improve the Marine Corps warfighting capabilities. However, a reliance on commercial technology may be more of a burden than an

advancement as it creates an overdependence on warrantees for repair and maintenance. Furthermore, it requires civilian contractors for technical support and sometimes for physical operation. Finally, as technologies advance, the Marine Corps must ensure its training programs are able to keep pace with these new technologies as they emerge and are employed, thereby avoiding the purchase of costly equipment no one can operate, which negates the equipment's intended usefulness. Commercial off-the-shelf equipment is certainly not without its merits or its place in the Marine Corps, though; but, new equipment must be implemented carefully to avoid making it the ultimate crutch – instead of the ultimate tool - to warfighting. Because the last thing a Marine wants his communication equipment to do in a situation when it's needed most is mimic Hal from *2001: A Space Odyssey* and say, "I'm sorry, Dave, but I'm afraid I can't do that."

2,155 Words

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